

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Sigurd Wagner

Serial No.: 09/647,193

Filed: 07/03/2001

Title: Method for Making Multilayer Thin-Film Electronics



Examiner: Estrada, Michelle

Group Art Unit: 2823

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REQUEST FOR RECONSIDERATION OF AMENDMENT AFTER ALLOWANCE  
UNDER 37 C.F.R. § 1.312**

Sir:

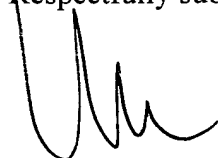
Applicant submits this Request for Reconsideration of the Amendment After Allowance Under 37 C.F.R. § 1.312 filed by Applicant on December 22, 2004 to add a Statement of Government Rights section to the specification and to properly group the allowed claims. A copy of the Amendment previously filed by Applicant is attached hereto at Exhibit A. Applicant received a Response to Rule 312 Communication dated March 4, 2005, which indicated that the amendments to the specification were accepted, but that the claim amendments were rejected as introducing substantive changes to the claims.

Pursuant to a telephone conference between Examiner Michelle Estrada and Attorney for Applicant's associate, Mark Nikolsky (Reg. No. 48,319), Applicant submits this Request for

Reconsideration, and respectfully submits that no substantive changes have been made to the claims. Accordingly, Applicant respectfully requests that the enclosed Amendment be entered in its entirety.

Dated: 3/23/05

Respectfully submitted,

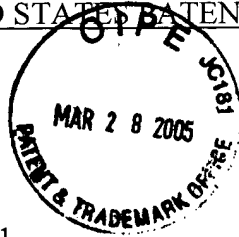


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
P.O. Box 1450  
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Re: Our file: 7616/16/1 Art Unit: 2823  
Applicant: Sigurd Wagner Examiner: Estrada, Michelle  
Serial No.: 09/647,193  
Filed: 07/03/01  
For: Method for Making Multilayer Thin-Film Electronics

Sir:

Enclosed for filing in the United States Patent and Trademark Office is the following:

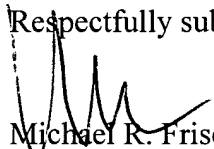
1. Request for Reconsideration of Amendment After  
Allowance Under 37 C.F.R. § 1.312 with Exhibit A
2. Transmittal Sheet
3. Postcard Receipt

CONDITIONAL PETITION

If any extension of time is required for the submission of the above-identified items, Applicant requests that this be considered a petition therefor. Please charge any additional charges or any other charges relating to this matter to the deposit account of the writer, **Account No. 501402**. A duplicate copy of this letter is enclosed.

3/23/05  
Date

Respectfully submitted,

  
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I hereby certify that this correspondence is being deposited with the United States Postal Service, First Class Mail, postage prepaid, to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 3/23/05.

By:   
Janelle Fava

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Sigurd Wagner

Serial No.: 09/647,193

Filed: 07/03/01

Title: Method for Making Multilayer Thin-Film Electronics



Examiner: Estrada, Michelle

Group Art Unit: 2823

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**AMENDMENT AFTER ALLOWANCE UNDER 37 C.F.R. § 1.312**

Sir:

This is an amendment after allowance pursuant to 37 C.F.R. § 1.312 and M.P.E.P.  
714.16.

**Amendments to the Specification** appear on page 2.

**Amendments to the Claims** begin on page 3.

**Remarks** begin on page 15.

AMENDMENTS TO THE SPECIFICATION

On page 1 of the Specification, please add the following Statement of Government Rights section:

--STATEMENT OF GOVERNMENT RIGHTS

The present invention has been made under a grant of DARPA, federal grant no. F33615-94-1-1464. Accordingly, the government may have certain rights to the present invention.--

## AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A process for manufacturing macroelectronics comprising the steps of:

producing thin film active electronics on separate carrier substrates;

positioning the thin film active electronics in facing relation; and

combining said substrates using anisotropic electrical conductors or light guides so that the thin film active electronics are encapsulated by the anisotropic electrical conductors or the light guides.

2. (Original) The process of claim 1 wherein one of said substrates is a flexible foil.
3. (Original) The process of claim 1 wherein one of said substrates is a rigid plate.
4. (Original) The process of claim 2 wherein the material for one of said substrates is plastic.
5. (Original) The process of claim 3 wherein the material for one of said substrates is plastic.
6. (Original) The process of claim 2 wherein the material for one of said substrates is glass.

7. (Original) The process of claim 3 wherein the material for one of said substrates is glass.
8. (Original) The process of claim 2 wherein the material for one of said substrates is metal.
9. (Original) The process of claim 3 wherein the material for one of said substrates is metal.
10. (Original) The process of claim 1 wherein the thin film active electronics are produced continuously on separate carrier substrates.
11. (Original) The process of claim 4 wherein organic light emitting diodes are formed on the plastic substrate.
12. (Original) The process of claim 5 wherein organic light emitting diodes are formed on the plastic substrate.
13. (Original) The process of claim 6 wherein organic light emitting diodes are formed on the glass substrate.
14. (Original) The process of claim 7 wherein organic light emitting diodes are formed on the glass substrate.
15. (Original) The process of claim 6 wherein thin film transistors are formed on the glass substrate.

16. (Original) The process of claim 7 wherein thin film transistors are formed on the glass substrate.
17. (Cancelled)
18. (Cancelled)
19. (Cancelled)
20. (Cancelled)
21. (Cancelled)
22. (Cancelled)
23. (Original) The process of claim 4, wherein the thin film active electronics comprise thin film transistors.
24. (Original) The process of claim 8, wherein the metal comprises steel.
25. (Original) The process of claim 24, wherein the thin film active electronics comprise organic light emitting diodes.



26. (Cancelled)

27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (Cancelled)

36. (Cancelled)

37. (Cancelled)

38. (Cancelled)

39. (Cancelled)

40. (Cancelled)

41. (Cancelled)

42. (Previously Presented) The process of claim 1, wherein at least one of the substrates is flexible.

43. (Previously Presented) The process of claim 1, wherein both of the substrates are flexible.

44. (Cancelled)

45. (Cancelled)

46. (Cancelled)

47. (Cancelled)

48. (Cancelled)

49. (Cancelled)

50. (Cancelled)

51. (Cancelled)

52. (Cancelled)

53. (Cancelled)

54. (Cancelled)

55. (Cancelled)

56. (Cancelled)

57. (Cancelled)

58. (Cancelled)

59. (Cancelled)

60. (Cancelled)

61. (Cancelled)

62. (Cancelled)

63. (Cancelled)

64. (Cancelled)

65. (Cancelled)

66. (Cancelled)

67. (New) A process of making electronic circuits comprising the steps of:

forming at least two active circuits on separate carrier substrates;

positioning the at least two active circuits in facing relation; and

connecting said active circuits with a material which conducts in a direction perpendicular to the separate carrier substrates, wherein the at least two active circuits are encapsulated by the material.

68. (New) The process of claim 67, wherein at least one of the substrates is flexible.

69. (New) The process of claim 67, wherein both of the substrates are flexible.

70. (New) A method of manufacturing an electronic display comprising the steps of:

depositing a transparent conductor on a transparent substrate;

forming a thin film organic light emitting diode circuit on said transparent conductor;

forming a thin film transistor circuit on a second transparent substrate;

positioning the organic light emitting diode and thin film transistor circuits in facing relation; and

laminating said circuits to each other.

71. (New) The method of claim 70 wherein said laminating step uses an adhesive anisotropic conductor.

72. (New) The method of claim 71 wherein the conductor is an electrical or optical conductor.

73. (New) The method of claim 71 wherein the bonding layer is the conductor.

74. (New) The process of claim 70, wherein at least one of the substrates is flexible.

75. (New) The process of claim 70, wherein both of the substrates are flexible.

76. (New) A method of manufacturing an electronic circuit comprising the steps of:

forming a first active circuit on a first plane;

forming a second active circuit on a second plane;

positioning the first and second active circuits in facing relation; and

co-laminating said first and second planes with an anisotropic conductor, wherein the anisotropic conductor encapsulates the first and second circuits.

77. (New) The process of claim 76, wherein at least one of the planes is flexible.

78. (New) The process of claim 76, wherein both of the substrates are flexible.

87. (New) The process of claim 81, wherein the material for one of said substrates is metal.
88. (New) The process of claim 79, wherein the thin film active electronics are produced continuously on separate carrier substrates.
89. (New) The process of claim 82, wherein organic light emitting diodes are formed on the plastic substrate.
90. (New) The process of claim 83, wherein organic light emitting diodes are formed on the plastic substrate.
91. (New) The process of claim 82, wherein organic light emitting diodes are formed on the glass substrate.
92. (New) The process of claim 83, wherein organic light emitting diodes are formed on the glass substrate.
93. (New) The process of claim 82, wherein thin film transistors are formed on the glass substrate.
94. (New) The process of claim 83, wherein thin film transistors are formed on the glass substrate.

95. (New) The process of claim 79, wherein at least one of the substrates is flexible.

96. (New) The process of claim 79, wherein both of the substrates are flexible.





## REMARKS

Applicants submit this Amendment after Allowance under 37 C.F.R. § 1.312 and M.P.E.P. § 714.16. Applicants submit that the amendments set forth herein relate to formal matters, and require no substantial amount of additional work.

Applicants have amended the Specification to include a Statement of Government Rights section. Pursuant to the Examiner's Amendment of September 24, 2004, claims 52-66 were cancelled.

Applicants have amended the claims so that the claims are properly grouped together. Specifically, claims 17-22, 26-41, and 44-51 were cancelled so that allowed independent claim 1 and claims 2-16, 23-25, and 42-43 depending therefrom are grouped together. Allowed independent claim 17 and claims 44-45 depending therefrom have been re-presented as new claims 66-69. Allowed independent claim 18 and claims 19-21 and 46-47 depending therefrom have been re-presented as new claims 70-75. Allowed independent claim 22 and claims 48-49 depending therefrom have been re-presented as new claims 76-78. Allowed independent claims 26 and claims 27-41 and 50-51 depending therefrom have been presented as new claims 79-96. No new matter, nor any substantive change to the scope of the claims, has been introduced by these amendments.

Claims 17-22, 26-41, and 44-66 have been cancelled, and claims 67-96 were added. Claims 1-16, 23-25, 42-43, and 67-96 are pending in this case. Applicants herewith submit the required Issue Fee, and respectfully request that the amendments presented herein be entered and that a patent issue.

Respectfully submitted,



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Dated: 12/22/04